27. The method of claim 24, wherein said hazardous material rules includes rules relating at least one of regulatory, transportation, storage, handling, exposure or emergency requirements for said hazardous material and its components.

28. The method of claim 24, wherein step (e) further includes the step of automatically disseminating said hazard information online.

29. The method of claim 24, wherein step (e) further includes the step of creating hazardous material labels.

30. The method of claim 24, wherein said hazardous material and its components characteristics are referenced by a rules engine operating on user-defined rules to associate hazard information from a user-defined database of information with said hazardous material and its components.

31. The method of claim 24 wherein said hazard information is comprised of a user defined set of words and phrases.

REMARKS

At the time the Final Office Action issued, claims 1 – 17 were pending in the application. Attorney hereby responds to the grounds for rejection set forth in the Final Office Action.

Rejection of Claims 1 – 17 Under 35 U.S.C. §102(a)

In Paragraphs 1 – 2 of the Office Action, the Examiner rejects claims 1 – 17 as being anticipated by U.S. Patent 5,712,990 to Henderson. Attorney respectfully traverses the rejection.

a. Claims 1 - 7

With respect to claims 1 – 7, the Examiner asserts that Henderson discloses:

(1) an authoring module having automated means for decompiling material data (col. 11, lines 1 – 25);

(2) an automated means for associating the decompiled data with hazard information (col. 12, lines 15 – 25);

(3) a means for recompiling material data associated with hazard information to provide hazard information about the material, its components, decomposition products of the material and substances related to the material (col. 12, lines 25 –45);

(4) means for decompiling material data comprises a deblending analyzer (col. 11, lines 1 – 25);

(5) a substance processor (col. 10, lines 25 –50);

(6) a rules engine for recompiling material data associated with hazard information for generating words and phrases used in the production of documents;

(7) a distribution module for disseminating hazard information (col. 19, line 50 to col. 20, line 10);

(8) an online module (col. 21, lines 45 – 50); and

(9) a labeling module (col. 16, lines 55 – 65).

Amended claim 1 requires the decompiling the hazardous material and a determination of its components and their respective characteristics. As noted on page 9, the last paragraph, the decompiled hazard information is information about a material, its components derived from the original material (decomposition products) and substances related to the material. This decompiling process further includes the use of an automated deblending module and a substance processor. In contrast Henderson '990 extracts by preprogrammed computer steps, "a hazardous waste <u>segregation</u>, shipment and disposal profile from the information in the material entry" (emphasis added). The process of decompiling hazardous materials as defined at pages 9 – 10 goes far beyond the mere segregation disclosed by Henderson '990.

By way of example, if Henderson '990 were used to track chemical storage (though it is used to only track hazardous waste) it might note that barrels of benzene and a C6 – C9 Aromatic Hydrocarbon Stream were in storage requires segregation of the two materials. The present invention's process goes beyond that. It could be used to recognize the two materials and call for separate storage. Further, with decompiling, the present invention would recognize that benzene (C_6H_6) could not be deblended any further and that Aromatic Hydrocarbon Stream is a blend of benzene, toluene (C_7H_8), and any one of the three xylene (C_8H_{10}) isomers. The present invention

could further be used to track differing xylene blends. The present invention then associates hazard information with the Aromatic Hydrocarbon Stream and its components, benzene, toluene, and xylene.

It will be appreciated that Henderson '990's process of segregation of hazardous waste does not disclose automated means for decompiling of a hazardous material as described in the specification. Nothing in Henderson '990 discloses the capability of decompiling a substance into its components or determining information regarding the components.

Moreover, Henderson '990 does not include a means for recompiling the hazardous material and its components with hazard information. As noted above, at best, Henderson '990 merely tracks and relays information regarding a base substance. No effort is made to decompile it into its components. It follows then that Henderson '990 cannot recompile something it has never determined.

The Examiner suggests that Henderson '990 discloses a rules engine. Amended claim 1 requires a user defined set of hazardous material rules. Henderson '990 discloses carrying out a set of pre-programmed computer steps. Nowhere in Henderson '990 does it disclose permitting a user to make such definitions.

Lacking the above limitations, Henderson '990 cannot anticipate amended claim 1. Further, Henderson does not suggest the process of automated decompiling. It does not disclose or suggest recompiling of hazardous material and components with hazard information. Nor does it disclose or suggest a user defined set of hazardous material rules. Accordingly, amended claim 1 is patentable over the cited art. Dependent claims claims 2 – 7 and 23 include each and every limitation of amended claim 1 and are, therefore, likewise patentable over the cited art.

b.   Claims 8 - 13

The Examiner makes many of the same arguments with respect to process claim 8 and machine claims 9 –13. Attorney has cancelled claims 8 – 13 and the issues raised by the Examiner with respect to these claims are now moot.

c.   Claims 14 -17

On page 5 of the Final Office Action, the Examiner asserts that Henderson '990 discloses the following:

(1) an authoring module having automated means for decompiling material data (col. 11, lines 1 – 25);

(2) a rules engine for automatically associating decompiled data with hazard information by associating words and phrases with the decompiled data (col. 12, lines 15 – 25); and

(3) a means for disseminating hazard information where said means for disseminating hazard information communicates with the authoring module.

Amended claim 14 now recites a system for hazard communication including an authoring module and a module for decompiling hazardous material. Attorney respectfully submits that Henderson '990 fails to disclose a module for decompiling as used in the context of the present invention. The remarks with respect to the process of decompiling and how Henderson '990 fails to disclose same with respect to amended claim 1 are equally applicable to amended claim 14. Hence, Henderson fails to disclose this limitation of amended claim 14.

Henderson '990 further fails to disclose a means for associating the hazardous material and its component characteristics with hazard information utilizing a set of user defined rules. As noted in Henderson '990, col. 12, lines 15 – 20 and col. 21, lines 10 - 16, the association is carried out by a series of preprogrammed steps. Henderson '990 then goes on to discuss different means of carrying out these preprogrammed steps. Nowhere in Henderson '990 does it disclose that the user may set up the rules for creating the associations. Henderson '990 would require a modification of the preprogrammed steps, implying that some one must modify the code. It will be appreciated that in such situations, a user is rarely called upon or allowed to make such modifications.

In the present invention, the associations are created as a function of user-defined rules. An example of one of the user-defined rules is set forth in the specification at pages 15 - 16. The limitation of user defined criteria for associating hazardous material with hazard information is not disclosed in Henderson '990.

Henderson '990 fails to disclose the limitations of automated decompiling of hazardous materials and their respective characteristics or the creation of association of hazardous materials and hazard information based on user defined rules and cannot, therefore, anticipate amended claim 14. Accordingly, amended claim 14 is patentable over the cited art.

Attorney has cancelled claims 15 – 17 and added new claims 18 – 22, which depend from amended claim 14. Since claims 18 – 22 include each and every limitation of patentable claim 14, they are likewise patentable over the cited art.

Attorney has further added method claims 24 – 31, incorporating the limitations discussed above as steps in a method. Attorney respectfully submits that method claims 24 –31 are likewise patentable over Henderson '990 for the reasons discussed above.
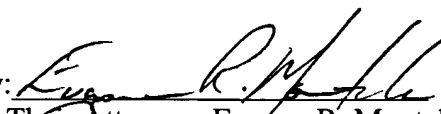
Conclusion

Attorney has submitted an amended set of claims and has addressed each ground for rejection set forth in the Final Office Action. Attorney respectfully submits that in light of the above amendments and remarks, the present application, following entry of this Preliminary Amendment, is now in a state ready for allowance.

In the event that the Examiner has any questions or issues regarding the above amendments and remarks, the Examiner is invited to call the undersigned to discuss the questions or issues prior to the issuance of any written action.

Respectfully submitted,

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1.   (Second Amended)   A data-centric hazard communication apparatus comprising:

a)   an authoring module <u>for identification of hazardous material and its</u> <u>characteristics, the authoring module further comprising:</u>

-    [having] an automated means for decompiling <u>said hazardous</u> material [data], and <u>determining of its components and their respective characteristics;</u>

-    an automated means for associating [the] <u>said hazardous material and said</u> <u>component</u> [decompiled data] <u>characteristics</u> with hazard information, <u>using a user defined set of</u> <u>hazardous material rules;</u>

-    and a means for recompiling <u>said hazardous</u> material [data] <u>and said</u> <u>components</u> associated with hazard information to provide hazard information about the <u>hazardous</u> material, its components, decomposition products of [the] <u>said hazardous</u> material, and substances related to [the] <u>said hazardous</u> material; and

b) a means for disseminating hazard information about said <u>hazardous</u> material , its components, decomposition products of the material, and substances related to the <u>hazardous</u> material wherein said means for disseminating hazard information communicates with said authoring module.

2.   (First Amended)   The apparatus of claim 1 wherein said means for decompiling <u>said</u> <u>hazardous</u> material [data] comprises a deblending analyzer.

3.   (First Amended)   The apparatus of claim 2, wherein said means for decompiling <u>hazardous</u> material [data] further comprises a substance processor.

4.   (First Amended)   The apparatus of claim 1 wherein said means for recompiling <u>hazardous</u> material <u>and said components</u> [data] associated with hazard information is a rules engine for generating words and phrases used in the production of documents and system output.

Please amend claim 14 to read as follows:

14.   (First Amended)   A data-centric hazard communication [apparatus] <u>system</u> comprising:

a)   an authoring module <u>for entering information about a hazardous material and its</u> <u>characteristics;</u> [having]

b)   a[n automated means] <u>module</u> for decompiling <u>said hazardous</u> material [data] <u>into</u> <u>its components and their respective characteristics;</u> [and]

c)   a rules engine <u>operating on a set of user-defined rules</u> for automatically associating [the decompiled data] <u>said hazardous material characteristics and its component</u> <u>characteristics</u> with <u>user-defined</u> hazard information [by associating words and phrases with the decompiled data] for use in the production of documents and system output to provide hazard information about [the] <u>said hazardous</u> material, its components, [decomposition products of the material,] and substances related to [the] <u>said hazardous</u> material; and

<u>d</u>[b]) a [means] <u>module</u> for disseminating <u>said</u> hazard information about said <u>hazardous</u> material, its components, [decomposition products of the material,] and substances related to [the] <u>said hazardous</u> material wherein said [means for disseminating hazard information] <u>module</u> communicates with said authoring module.

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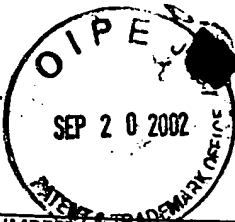
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